

Report From Agency

REPORT TO LEGISLATURE

NR 432, Wis. Adm. Code
Establishment of provisions for major electric generating units in Wisconsin
to comply with the Clean Air Interstate Rule (CAIR) promulgated by the
U.S. Environmental Protection Agency

Board Order No. AM-03-06
Clearinghouse Rule No. 06-104

Basis and Purpose of the Proposed Rule

On May 12, 2005, the United States Environmental Protection Agency (EPA) published the final version of the Clean Air Interstate Rule (CAIR) in Federal Register, 70 FR 25162. CAIR is a requirement to reduce the interstate transport of pollutants that significantly contribute to nonattainment of ozone and fine particles (PM_{2.5}) pollution. The program is directed at reducing nitrogen oxides (NO_x) and sulfur dioxide (SO₂) emissions from the electric power sector across a 28-state region of the Eastern United States, including Wisconsin and the District of Columbia. The EPA is requiring these states to revise their state implementation plans (SIPs) to include control measures to reduce emissions of NO_x and/or SO₂ before 2009 and again by the final compliance date in 2015.

Under s. 285.14(2), Stats., rules that affect the State Implementation Plan must be submitted to standing committees of the legislature with jurisdiction over environmental matters at least 60 days before the rule may be submitted to the U.S. Environmental Protection Agency. It is the Department's intent to submit the proposed rule to the U.S.EPA as a revision to the State Implementation Plan.

This rule is being proposed to comply with the federal requirement promulgated in the Clean Air Interstate Rule (CAIR) to reduce emissions of SO₂ and NO_x in order to address the issue of interstate ozone and fine particle pollution. Staff proposes to fulfill this requirement by participating in the federal trading programs for major EGUs and using the abbreviated SIP option.

The CAIR allows states to participate in the federal program and have the discretion to make some alterations to the NO_x allocation structures in the CAIR trading programs for both the NO_x annual market and the NO_x ozone season market. The Department proposes that the state will submit an "abbreviated SIP" which will consist of the Department rules detailing the NO_x allocation structure. All other aspects of the CAIR program, including the SO₂ annual market, will be implemented and administered by the EPA.

The Department is proposing to use the abbreviated SIP option for two major reasons. First, it allows a state the discretion of creating a NO_x allocation structure that promotes environmental values in Wisconsin through the encouragement of the development of renewable energy, rewarding energy efficiency and promoting new generation. Additionally, it allows for the Department to craft a rule to offer additional compliance options, decrease compliance and energy costs and create a market that allow Wisconsin energy producers to remain competitive with energy producers in surrounding states.¹ Second, it significantly limits the administrative burden for Wisconsin by establishing a rule that is primarily administered by the EPA.

¹ It is particularly important for Wisconsin energy producers to remain competitive with the areas where there are the largest interfaces for transmission capacity. The three largest interfaces are Illinois with 875 MW, Minnesota with 279 MW and the Upper Peninsula of Michigan with 475 MW.

The guiding principle for the development of the Department's proposed rule was to utilize the federal rule to the maximum extent except where there is explicit authorization for state discretion and there is a strong rationale for the exercise of that discretion. The rationale was based on creating a rule that:

- Provides for equal or better environmental protection;
- Is cost effective;
- Improves the ability of the emission market to determine the least cost emission reduction;
- Reduces the burden on the development of new generation;
- Promotes energy efficiency;
- Encourages renewable energy development;
- Simplifies the rule structure; and
- Reduces the administrative burden.

The proposed rule details the NO_x allocation structure that would apply to both the annual and ozone season programs. Table 1 is a comparison of the NO_x allocation structure for the FIP and the proposed rule.

The rationales for those state discretionary elements where staff proposes a different approach than the FIP or where the Department has have revised the public hearing draft are explained in the sections below.

Summary of Public Comments

Two public hearings were held on October 10, 2006 in Stevens Point and October 12, 2006 in Milwaukee. 11 people attended the hearings. We Energies and Wisconsin Utilities Association (joined by Dairyland Power) testified in opposition to the proposed rule structure. Sierra Club, Clean Wisconsin and Calpine Corporation testified in support of the proposed rule structure.

In addition, the Department received written comments from the following:

- Alliant Energy
- American Wind Energy Association (AWEA)
- Brent Sainsbury (Citizen)
- Business Council for Sustainable Energy (BCSE)
- Calpine Corporation
- Clean Wisconsin
- Local 2150 of International Brotherhood of Electrical Workers (IBEW 2150)
- James Dudley Cooper (Citizen)
- Madison Gas & Electric (MG&E)
- Manitowoc Public Utilities (MPU)
- Peter Taglia (Citizen)
- RENEW Wisconsin (RENEW)
- Shaunna Cook (Citizen)
- Sierra Club
- Steve Tesmer (Citizen)
- U.S. EPA
- We Energies
- Wisconsin Industrial Energy Group, Inc. (WIEG)
- Wisconsin Legislative Council Rules Clearinghouse (Legislative Council)
- Wisconsin Manufacturing and Commerce (WMC)
- Wisconsin Paper Council (WPC)

The comments and the staff's responses are summarized in Attachments C (Executive Summary) and D (Detailed Summary and Responses).

Modifications Made

A number of technical changes were made in response to comments from the EPA, MG&E, Calpine, Clean Wisconsin, Sierra Club, RENEW Wisconsin and Wisconsin Legislative Council Rules Clearinghouse. These include making the definitions substantively similar to the federal definitions, clarifications of calculation of unit baselines, when new units are eligible to receive allocations from the main allocation pool and correction of equations and units used in equations. One major change was to the definition of a cogeneration unit. The definition was changed to correspond to the federal definition.

The emission limit target rate for eligibility for early emission reduction credits from the compliance supplement pool was increased from 0.15 lbs/mmBtu to 0.25 lbs/mmBtu. This was changed in response to comments received and to reflect the level in the FIP.

Appearances at the Public Hearing

October 10, 2006 – Stevens Point

In support – none
In opposition – none

As interest may appear:

Bill Skewes, Wis. Utilities Assn., 33 E. Mifflin St., #202, Madison, WI 53703
David Bender, Clean Wisconsin, 634 W. Main Street, Suite 101, Madison, WI 53703
Cindy Brandt, WPSC, 700 N. Adams Street, Green Bay, WI 54307
Dave Minkey, Wis. Public Service Corp., 700 N. Adams Street, Green Bay, WI 54307

October 12, 2006 – Milwaukee

In support – none
In opposition – none

As interest may appear:

Elizabeth Wheeler, Clean Wisconsin, 122 State Street, Suite 200, Madison, WI 53703
Kathleen Standen, WE Energies, 22 E. Mifflin Street, Suite 850, Madison, WI 53703
Jason Goodwin, Calpine Corp., 717 Texas Avenue, Suite 1000, Houston, TX 77002
Peter L. Gardon, Calpine Corp., 22 E. Mifflin Street, Suite 600, Madison, WI 53701
Dave Durment, 4350 Lighthouse Drive, Racine, WI 53402
Brenda Bergemann, 1301 Timmie Drive, Racine, WI 53406
Katherine C. LoPiccolo, 1725 N. Prospect Ave., #308, Milwaukee, WI 53202

Changes to Rule Analysis and Fiscal Estimate

In response to a comment from the Wisconsin Legislative Council Rules Clearinghouse, the statutory authority was limited to 285.11(1), Stats. and a more specific reference was made to 227.14(1m). Additionally, changes were made to the text of the plain language analysis to clarify the language. There were no changes to the fiscal estimate.

Response to Legislative Council Rules Clearinghouse Report

The recommendations were accepted.

Final Regulatory Flexibility Analysis

Under Wisconsin law, none of the electric generating units that are impacted by the CAIR are a small business. CAIR imposes no reporting, compliance or performance standards on small businesses.

As part of the federal rule promulgation process, the EPA is required under the Regulatory Flexibility Act to consider potential impacts of proposed regulations on small entities. The small entity definition used by EPA includes: (1) electric utilities that produces 4 billion kilowatt-hours or less; (2) a small governmental jurisdiction that is a government of a city, county, town, district, or special district of less than 50,000; and (3) a small organization that is any not-for-profit enterprise that is independently owned and operated and is not dominant in its field. After considering the economic impacts of the rule on small entities, EPA has concluded that these rules will not have a significant economic impact on a substantial number of small entities and has determined that it is not necessary to prepare a regulatory flexibility analysis for this rule.

**APPENDIX C
EXECUTIVE SUMMARY OF COMMENTS AND
STAFF'S RESPONSE TO COMMENTS**

DATE: December 18, 2006

FILE REF: AM-03-06

TO: Al Shea

FROM: Kevin Kessler

SUBJECT: Executive summary of comments received on AM-03-06 Proposed NR 432 creating structure of allocation of Clean Air Interstate Rule NO_x annual and ozone season allowances

The Natural Resources Board authorized public hearings on the proposed NR 432 at the August 2006 meeting. The public hearings were held on October 10, 2006 in Stevens Point and October 12, 2006 in Milwaukee. 11 people attended the hearings. We Energies and Wisconsin Utilities Association (WUA), joined by Dairyland Power testified in opposition to the proposed rule structure. Sierra Club, Clean Wisconsin and Calpine Corporation testified in support of the proposed rule structure.

In addition, the Department received written comments from the following:

- Alliant Energy
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- RENEW Wisconsin (RENEW)
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- Steve Tesmer (Citizen)
- U.S. EPA
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- Wisconsin Legislative Council Rules Clearinghouse (Legislative Council)
- Wisconsin Manufacturing and Commerce (WMC)
- Wisconsin Paper Council (WPC)

Issue	Summary of Issue	In Support	Opposed	Department Response
I. Allocations				
A. Output based allocations	The federal implementation plan (FIP) uses heat input to determine the unit baseline for units operating prior to January 1, 2001. For units that began to operate on or after January 1, 2001, the FIP uses energy output to determine unit baselines. Under the proposed rule structure all units, regardless of the date it began operation, would use energy output to calculate the unit baseline.	Clean Wisconsin, Sierra Club, RENEW, AWEA, BCSE, Calpine and Citizens	We Energies, WMC, WUA, and Dairyland	The proposed rule structure will use generation output for the basis of allocations for all units. This promotes generation efficiency and uses the same type of data for allocations regardless of when the units started operating.
B. Updating unit baseline	In the FIP, units that began operation prior to January 1, 2001 calculate unit baseline using 2000-2004 heat input data. Units that begin operation on or after January 1, 2001 calculate unit baseline using the first five years of energy generation data. This unit baseline remains fixed regardless of a unit's increase in generation, decrease in generation or retirement. The proposed rule updates the baselines for all units in the main allocation pool starting 2011. In 2011, and every five years thereafter, all units that have five years of operating data (and are therefore eligible for allocations from the main allocation pool) update their unit baseline using the five most current years of operating data.	Clean Wisconsin, Sierra Club, RENEW, BCSE and Calpine	We Energies, WMC, Alliant Energy, WUA and Dairyland	The proposed rule structure will use an updating structure for calculating unit baselines. This promotes generation efficiency, encourages and rewards changes in generation behavior and eliminates the bias against new units.
C. Fuel weighting	Fuel weighting (or "fuel adjustment factors") adjusts the baseline of a unit dependent on the primary fuel that it burns. In the FIP, the baselines are multiplied by 1.0 for coal-fired units, by 0.6 for oil-fired units and by 0.4 for all other fuels. The proposed rule does not use any adjustment based upon fuel.	Clean Wisconsin, Sierra Club, RENEW, BCSE and Calpine	We Energies, WMC, Alliant Energy, WUA and Dairyland	The proposed rule structure will not include fuel weighting in calculating unit baselines. Fuel weighting distorts the market economy and interferes with the market's ability to determine the least cost control.
D. Auctions	The FIP does not include a provision for auctioning of the NOx allowances but the federal rule does give the states the discretion to auction allowances in the CAIR state implementation plan. The proposed rule does not have a provision for auctioning of allowances.	Clean Wisconsin, Sierra Club, RENEW and Citizens	No comments in opposition received	The proposed rule structure will not include a provision for auctioning. This type of provision would add to the complexity of the rule and would require additional statutory authority for the Department to be able to run an auction and distribute funds.
II. Renewable energy	The FIP only distributes allowances to fossil fuel-fired units. Although the FIP does not incorporate renewable generation into the CAIR NOx allocations structure, the federal rule does give the discretion to the state to allocate NOx allowances to renewable units either through a set-aside or through direct allocations. Initially, the Department had proposed, through a series	Clean Wisconsin, Sierra Club, RENEW, AWEA, BCSE, MG&E and Citizens	We Energies, WMC, Alliant Energy, WUA and Dairyland	The proposed rule structure will include renewable energy to promote and reward the development of new renewable energy. New renewable units are allowed to receive allowances from the main allocation pool. The new unit set-aside is reserved to assist

	<p>of public information meetings, to have a renewable energy and energy efficiency set-aside. Through comments received and more investigation, the Department proposed that direct allocations to renewable units be made through the main allocation pool resulting in a simplistic scheme to include renewable units limiting both the state administrative burden as well as the burden on electric generators.</p> <p>Commenters suggested the following changes:</p> <ul style="list-style-type: none"> - Allow new renewable units to receive allowances from the new unit set-aside. - Allow existing renewable units to obtain allowances. - Create a set-aside for renewable energy and energy efficiency projects. 			<p>new fossil-fuel unit with compliance requirements in the initial years of operation.</p> <p>The proposed rule structure was developed to encourage and reward the development of new renewable energy. Allowing existing renewable energy to receive allowances would not serve this purpose.</p> <p>A set-aside is unnecessary for renewable energy since renewable units receive allocations directly from the main allocation pool. Supply-side energy efficiency is rewarded through the allocation of allowances based upon generation output. The creation of a set-aside for demand-side energy efficiency would be complex with a high administrative burden resulting in only a small number of eligible projects. The complexity is due to the calculations involved in determining the amount of energy saved and the emissions displaced by the saved energy.</p>
III. New units	<p>Units that begin operation on or after January 1, 2001 (referred to as "new units") do not receive allocations from the main allocation pool for 2009-2014 since these units do not have sufficient operating data for establishing a baseline for the initial allocation in 2007. For these new units, a set-aside is created that consists of both annual and ozone season allowances. The new units apply to the set-aside based on the unit's previous year or ozone season NOx emissions. Any allowances in the set-aside that have not been distributed to new units are distributed to units in the main allocation pool pro rata.</p> <p>Commenters have suggested the following changes:</p> <ul style="list-style-type: none"> - Bank unused new unit set-asides. - Change the allocation structure the allocation of new unit set-asides. 	<p>Comments from Clean Wisconsin, Sierra Club, RENEW, Citizens, MG&E and Calpine on recommended changes to the proposed rule structure for allocation to new units</p>		<p>In the proposed rule, unused new unit set-aside allowances are distributed to the main allocation pool. Banking the unused allowances could potentially result in a stricter level of control and high administrative burden.</p> <p>The structure of the new unit set-aside allocation balances the need for representative years of data and incorporating new units into the main allocation pool. Recommendations would create a complex structure for allocation of the new unit set-aside.</p>
IV. Cogeneration units	<p>The FIP discounts thermal energy provided by cogeneration units. The proposed rule removes this discount and allocates allowances based on 100% of the thermal energy generated.</p>	<p>Clean Wisconsin, Sierra Club, RENEW, BCSE and Calpine</p>	<p>No comments in opposition received</p>	<p>The proposed rule includes this provision.</p>

V. Compliance Supplement Pool (CSP)	The FIP allocates the CSP to units that have early reductions of NOx based upon a target emission rate of 0.25 lbs/mmBtu. The public hearing draft lowered the target emission rate to 0.15 lbs/mmBtu.	Clean Wisconsin, Sierra Club, RENEW and Citizens	WIEG, We Energies, WMC, Alliant Energy, WUA and Dairyland	The Department determined that lowering the target emission rate for early emission reduction credits would unnecessarily exclude those units that have instituted early emission reductions and potentially deter early emission reductions. The Department has changed the target emission rate to 0.25 lbs/mmBtu to reflect the rate in the FIP.
VI. Opt-in provision	The FIP gives the states the option to include industrial units into the structure of CAIR. Under this provision, industrial units that emit all emissions via a stack and monitor these emissions using part 75 monitoring requirements could obtain allowances from the allocation pools like an electric generating unit. This is called the "opt-in" provision since these units would have the choice on whether to opt-in to regulation under CAIR.	WPC, WIEG and MG&E	No comments in opposition received	The Department investigated whether an opt-in provision could be incorporated into the structure of the rule. Unfortunately, as a prerequisite to participating in the federal trading program, the EPA has determined that states that incorporate opt-in units must do so using the exact language in the federal implementation plan. The federal structure of allocations to opt-in units would not work within the proposed allocation structure. Therefore, the Department has determined that an opt-in provision will not be included at this time. There is the potential, through negotiations with the EPA, that opt-in units may be added at a later date by a separate rule making.
VII. Use of Federal Rule				
A. Consistency between state and federal rule	The major concern with having consistency between state and federal rule is that the state rule should not result in a stricter standard than the federal rule.	WPC and WMC		The deviation from the federal model rule will not result in a stricter program than the federal program because the proposed rule does not reduce the number of allowances available for compliance. One commenter was concerned that having a state rule would be an issue for generators that have interests in various states. But, out of the five adjacent states, only Iowa has chosen to use the federal model rule. Even if Wisconsin went with the federal model rule, there would still be inconsistencies with Illinois, Indiana, Michigan and Minnesota.
B. Proposed rule goes beyond EPA requirements	The commenters were concerned that the proposed rule structure resulting in requirements beyond those in the FIP.	IBEW 2150 and WMC		The proposed rule does not go beyond the federal version of CAIR. The same numbers of allowances are available for compliance under the state version as

				under the federal version and there is no restriction on interstate trading.
C. Adopt the federal version of CAIR	The federal model rule was written to be used as a model for the states to follow. A number of states have deviated from the federal model rule including Illinois, Michigan and Minnesota.	IBEW 2150, WIEG, We Energies, MG&E, WUA and Dairyland		Compared to EPA's model trading rule, the proposed rule provides for equal or better environmental protection, improves the ability of the emission market to determine the least cost emission reduction, reduces the burden on the development of new generation, promotes energy efficiency, encourages renewable energy development, simplifies the rule structure and reduces the administrative burden.
D. Goal of CAIR	WDNR's rule proposal fails to recognize the ultimate goal of the Federal CAIR program to prevent interstate transport of emissions at the regional level.	Alliant Energy		The proposed rule does not limit the distribution or the trading of allocations. The Department has determine that the proposed structure allows for the state to tailor the CAIR program to suit Wisconsin's policy goals as well as creating a simplistic program and one that has low administrative costs.
VIII. Implementation Issues				
A. Delay of CAIR SIP	The commenters were concerned with the delay of the CAIR SIP.	WIEG, WMC and Alliant Energy		The delay of the rule has been unfortunate. There have been a number of factors that have contributed to the delay. First, the Department is tied to the release of guidance and regulatory documents from the EPA and these documents have been slow in coming. For instance, the release of the "final" CAIR occurred May 12, 2005. Through discussions with the EPA, the Department understood the potential of an abbreviated SIP option. This was not fully explained until the release of the Federal Implementation Plan on April 28, 2006. This delay hindered the Department's ability to fully analyze what was the best course of action for the Department. Even with this delay, the Department is on target to meet the abbreviated SIP deadline of March 31, 2007.
B. Cost of Proposed NR 432	Calpine commented the emission reductions can be more cost-effectively achieved through programs that update	Calpine, WIEG, WMC, WUA and Dairyland		The proposed rule is not more stringent than the federal rule because the same

	<p>allowance allocations periodically, do not offer perpetual allocations to any facility, and do not differentiate allocation treatment based on the vintage of the affected facility.</p> <p>The other commenters were concerned that the proposed rule structure would increase energy costs in Wisconsin and that these costs have not been properly examined.</p>			<p>number of allowances are available under the FIP and the proposed rule. Additionally, the proposed rule does not limit interstate trading. As indicated by Calpine, the proposed rule structure has the potential to even decrease compliance costs.</p>
C. Proposed rule drives energy policy	<p>The commenters are concerned that the proposed rule "drives energy policy." The commenters state that Wis. Act 141 which increases renewable portfolio standards for electric generators governs the development of new renewable generation and the inclusion of renewable energy in CAIR is unnecessary.</p>	WIEG, WUA, Dairyland and We Energies		<p>The proposed rule does not drive energy policy – it follows the energy priorities laid out in Wis. Stats. 1.12(4)(d). Additionally, the rule is written with a pollution reduction goal and uses energy efficiency and renewable energy as a pollution reduction option. The proposed rule removes many barriers to the trading market efficiently determining the least cost method of controlling air pollution through using output based allocations and eliminating fuel weighting.</p>
D. State participation in CAIR emission trading program	<p>We Energies supports the states participation in the CAIR emission trading program.</p>	We Energies		<p>The Department is participating in the federal trading program as indicated.</p>
E. DNR's proposed rule is not needed to meet the ozone standard	<p>The commenters are concerned that the proposed rule is more stringent than necessary given that the majority of the nonattainment areas in Wisconsin are monitoring attainment based upon 2004-2006 data.</p>	WMC and WUA		<p>In the background memo for hearing authorization, the Department stated that the proposed rule had the effect of allocating less allowances in the nonattainment area resulting in additional environmental benefits. The impact of output based allocations has this effect but it was not the purpose of the basis for allocations.</p>
F. Regulatory complexity and administrative burden	<p>Alliant Energy is concerned that the proposed rule structure is unnecessarily complex and increases the administrative burden on the state and the regulated entities.</p>	Alliant Energy		<p>The additional complexity and administrative burden that is associated with the proposed rule over the FIP is justified by rewarding generation efficiency, encouraging the development of renewable energy and an allocation structure that provides for equal or better environmental protection.</p>
G. Proposed rule is responsive to evolving energy markets	<p>Calpine comments that the proposed rule structure implements allocation mechanisms that are responsive to evolving energy markets.</p>	Calpine		<p>The proposed rule includes these provisions.</p>
IX. Data issues	<p>We Energies is concerned with using both net and gross generation data to calculate unit baselines.</p>	We Energies		<p>See Department Response in section I.A.</p>

X. Green Tier	MG&E is concerned that the way that the rule language is structure that it may not recognize those that have entered into an environmental cooperative agreement instead of a Green Tier agreement. Additionally, MG&E requested clarifying language to ensure that superior environmental performance was not limited to the list in the rule.	MG&E		The Department has modified the proposed rule language to address these concerns.
XI. Clarification of rule language	MG&E requested clarification of some sections of the rule.	MG&E		The Department has modified the proposed rule language to address these concerns.
XII. Technical comments				
A. Intention of CAIR	MPU is concerned that one of its units will be regulated under CAIR when CAIR is not intending to regulate those types of units.	MPU		This comment is being addressed through discussions and an applicability determination with the US EPA.
B. Thermal energy conversion	Calpine commented that an energy conversion had the wrong units.	Calpine		The Department has made this correction in the proposed rule language.
C. Technical comments of EPA and Legislative Council	The Department received a number of technical comments from the Environmental Protection Agency. Primarily, the comments dealt with ensuring consistency between the federal rule language and the state rule language. The Legislative Council also made some technical comments.			The Department has modified the proposed rule language to address these concerns. The Department has changed the cogeneration definition to correspond to the federal definition.

**APPENDIX D
DETAILED SUMMARY OF COMMENTS AND
STAFF'S RESPONSE TO COMMENTS**

DATE: December 18, 2006

FILE REF: AM-03-06

TO: Al Shea

FROM: Kevin Kessler

SUBJECT: Detailed Summary of Comments received on AM-03-06 Proposed NR 432 creating structure of allocation of Clean Air Interstate Rule NO_x annual and ozone season allowances

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- U.S. EPA
- We Energies
- Wisconsin Industrial Energy Group, Inc. (WIEG)
- Wisconsin Legislative Council Rules Clearinghouse (Legislative Council)
- Wisconsin Manufacturing and Commerce (WMC)
- Wisconsin Paper Council (WPC)

Allocations

A. Use of energy output rather than heat input for determining unit baseline

The federal implementation plan (FIP) uses heat input to determine the unit baseline for units operating prior to January 1, 2001. For units that began to operate on or after January 1, 2001, the FIP uses energy output to determine unit baselines. Under the proposed rule structure all units, regardless of the date it began operation, would use energy output to calculate the unit baseline.

1. In Support

Clean Wisconsin, Sierra Club, RENEW, American Wind Energy Association, Business Council for Sustainable Energy, Calpine and a number of citizens support allocations based upon energy output.

The reasons given for supporting an output based allocation structure include:

- Encourages energy efficiency.
- Simplifies allocation structure, treating all units the same regardless of fuel usage or date started operations.
- Energy efficiency has significant co-benefits in reducing other emissions especially greenhouse gases.
- Output is a neutral metric and will not choose any specific energy as a winner or a loser.
- Will lower cost of meeting CAIR caps.
- Increased economic activity in state for development of renewable and energy efficiency resources.
- Lower demand for fossil fuels which will contribute to lower fuel costs and improved state balance of payments.
- Basing allocations on heat input fails to recognize the substantial investment made over the last several years on efficient generating facilities by new entrants to the wholesale electric power market.²

2. In Opposition

We Energies, WMC, WUA and Dairyland Power oppose using electrical output instead of heat input for calculating unit baselines.

The reasons given for using heat input are as follows:

- There is consistent and accurate data on heat input for all utilities in the Acid Rain Program.
- Using generation output will likely require utilities to develop new, more costly methods to measure gross MWhs, which creates incongruities and allocation inequities. No new technology or added costs would be required if the heat input method is used.
- Using an output based scheme provides disproportionately more allowances to certain natural gas units than to coal units, thereby unfairly affecting utility generation economics.
- The Department used a mix of gross and net MWh data sets to develop their output based allocation scheme, thereby creating an "apple and oranges" approach and allocation inequities. This would not be the case if the Department used the heat input allocation approach, which has been used for over a decade in the Acid Rain program.
- Utility operations are already driven towards improving generation efficiency due to economics and fuel costs.

3. Department Response

The Department has obtained the generation output data from the Clean Air Markets Division (US EPA) or directly from the unit. The allocations proposed in the hearing authorization draft, both net generation and gross generation data was used. For the units that had net generation for the baseline calculation, the Department has obtained gross generation data directly from the unit for the allocations in the Board Order for adoption. Therefore, the proposed rule for adoption allocated 2009-2014 allowances using gross generation data across all units.

Potentially, there may be a future allocation that will have to rely on net generation for some units while the majority of the units would have their unit baseline calculated based on gross generation. Using net and gross generation has been deemed an "apples to oranges" approach for calculating unit baselines. This "apples to oranges" result is superior to the method used in the federal language. Under the FIP, the allocations to units operating prior to January 1, 2001 are based upon heat input data for the years 2000-

² Specifically Calpine stated: contrary to efficient practice, the USEPA's model rule provides an incentive to burn more fuel since allocations are based pro-rata on fuel burned during the baseline evaluation period. This is particularly troubling given the advanced age of many of the nation's existing power generating facilities – which have been in operation for 30 to 40 years or more and possess generating efficiencies that are substantially lower than newer facilities constructed in the last five to ten years. Wisconsin is home to a substantial number of older power generating facilities, with heat rates well in excess of 10.0 mmBtu/MWh and output-based emission rates in the range of 3.1 lb NOx/MWh of electrical output. By stark contrast, new combined cycle generating facilities, like several constructed in Wisconsin over the last few years, typically exhibit heat rates of approximately 7.0 mmBtu/MWh or less and NOx emission rates in the range of 0.08 lb/MWh. When combined with the inherently lower emission rates dictated by BACT requirements, these new facilities offer NOx emission rates that are more than 97 percent less (on a lb/MWh basis) than the existing fleet of old, inefficient and high-emission power plants.

2004. The allocations to units beginning operation on or after January 1, 2001 are based upon gross electrical output for the first five years of operation. Therefore, under the FIP, allocations will be based upon both different basis (generation output v. heat input) and different years of operation. This will result in an allocation that is not representative of current energy generation.

One commenter suggested that heat input data is readily available for all utilities in the Acid Rain Program. This is true, but there are a number of units subject to CAIR that are not subject to the Acid Rain Program and therefore do not report data to the EPA's Acid Rain Program. The commenter did not suggest where the Department should obtain this data. For these units, the Department obtained gross generation data directly from the units.

The output based scheme allocates more allowances to the more efficient units. This results in natural gas units and cogeneration units receiving more allowances in the proposed state rule than in the federal rule and with the older, less efficient coal fired plants receiving less allowances than under the federal rule. It is unclear to the Department how allocating allowances to cleaner more efficient units would "unfairly affect utility generation economics."

B. Updating Unit Baseline

In the FIP, units that began operation prior to January 1, 2001 calculate unit baseline using 2000-2004 heat input data. Units that begin operation on or after January 1, 2001 calculate unit baseline using the first five years of energy generation data. This unit baseline remains fixed regardless of a unit's increase in generation, decrease in generation or retirement of the unit.

The proposed rule updates the baselines for all units in the main allocation pool starting 2011. In 2011, and every five years thereafter, all units that have five years of operating data (and are therefore eligible for allocations from the main allocation pool) update their unit baseline using the five most current years of operating data.

1. In Support

Clean Wisconsin, Sierra Club, RENEW, Business Council for Sustainable Energy and Calpine support the proposed allocation structure that updates the unit baselines every five years.

The reasons for supporting the updating provision are as follows:

- Results in lower emissions and greater energy production, compared to permanent allocation mechanisms.³
- Helps encourage lower-priced energy because producers will be willing to supply more energy at a given price if they receive an additional incentive of an updated allowance allocation for producing that energy.⁴
- Encourages continuous improvement in efficiency at every unit, and provides an allocation system that more accurately represents actual operation of the units.
- Decreases utility lobbying to government and changes utility market behavior to increase future allocations.
- This approach properly diverts emission allowances away from facilities that have reduced operation or been retired, and reallocates the emission allowances to facilities that continue to operate or increase operation over time.
- Permanent baselines will stifle new competitors that are interested in entering the power sector in Wisconsin, as well as those generators hoping to deploy new technology, such as integrated coal gasification (IGCC).
- The proposed rule represents a blended approach that balances the need for certainty and consistency regarding allocations for existing units, with the need for newer units to transition to the main allocation

³ Citing Economic Analysis of Alternative Methods of Allocating NOx Emission Allowances p. 3, ICF Consulting (Prepared for Acid Rain Division, Office of Air and Radiation, U.S. EPA) (Draft October 19, 1999).

⁴ Citing Economic Analysis at p. 13.

pool to fully and equitably participate in the CAIR program. The four-year delay between allocation and the compliance year allows sufficient planning time for affected sources to make educated decisions balancing the choice to implement emissions controls versus purchasing or selling allowances.

- Granting permanent allocations to any facility based on its age is an example of “grandfathering” that serves as an artificial protection from emission reduction obligations and a subsidy that shields such facilities from the true costs and forces of a market-based compliance program, thereby undermining the fundamental premise of market-based emission reduction programs such as CAIR.
- The electricity market is subject to many forces, including fluctuating fuel prices, political pressures, and regulatory circumstances. Establishment of fixed operating baselines used to calculate permanent emission allowance allocations for “core units” or any other segment of the affected source population should be avoided. DNR’s proposed rule appropriately balances the needs of existing and new units to equitably participate in the NOx cap and trade program.
- The hybrid unit / state baseline allocation concept proposed by DNR, in combination with the four-year allocation delay, offers multiple benefits including incorporation of newly affected units, reduced pressure on the new source set aside pool, and responsiveness of the allocation mechanism to changing electric market conditions.

2. In Opposition

We Energies, WMC, Alliant Energy, WUA and Dairyland Power oppose updating the unit baseline.

The reasons given for opposing the updating of the unit baseline are:

- It creates continuous regulatory uncertainty and it discourages utilities from retiring less efficient units.
- Part of the Department's rationale used to support updating unit baselines is that EPA will be making updates to the total Wisconsin emission budget every five years anyway.⁵ This rationale does not justify creating even more uncertainty.
- DNR should not be setting energy policy in the state by forcing older coal plants to shut down as their allocations get reduced because of the updating of the baseline.
- Adds an unnecessary level of complexity to the program by updating the baseline every five years.
- The Acid Rain program, which has been in place for more than a decade, is very effective at reducing SO2 emissions without updating the baseline.

3. Department Response

Updating of the unit baselines every five years starting in 2011 does create some regulatory uncertainty. In contrast to what the commenter suggests, this uncertainty exists in the federal rule as well starting in 2011 with the state baseline being updated every year to incorporate new units. An existing unit's proportional share of the main allocation pool may change every year in both the federal and the state allocation structure. Allocating allowances four years in advance of the compliance year allows the utilities sufficient amount of time to respond to the compliance requirements by installing emissions controls or buying allowances on the market.

Updating allowances does transition allowances away from retired units. There is no economic justification for allowing older units to have perpetual allowances simply because the unit starting operating prior to 2001. The proposed rule is structured so that a unit that is retired will continue to receive allowances for a number of years after it has been retired allowing that utility to shift the allowances from the retired unit that no longer needs the allowances for compliance to a new unit which has yet to establish its baseline.

Although the Acid Rain Program has acted as an excellent basis for developing a cap and trade program, the Department feels that the perpetual allocation aspect of the Acid Rain Program does not serve the state of Wisconsin well. The Public Service Commission has predicted that Wisconsin

⁵ The commenter states that the state baseline in the FIP is updated every five years. It is actually updated yearly starting in 2011.

will undergo a growth in energy generation and is rapidly developing new cleaner forms of electricity generation. With fixed unit baselines, it would put these new sources at a competitive disadvantage and not appropriately allow the market to shift allowances to the least-cost alternative.

4. Suggested Changes

Suggested Change: The updating approach could be improved by recalculating baselines more frequently like Illinois has proposed. Illinois has proposed to allocate allowances by generation output over the two prior years, and would be allocated three years in advance.

Suggested Change: DNR apply annual updates of the state-wide allowance baseline to the Phase I portion of the rule to include an opportunity for new sources that began operation in the mid-2000s timeframe to more quickly enter the main source allocation pool.⁶

Department Response: The Department is proposing to keep the updating structure as proposed in the hearing authorization draft. Updating the unit baseline more frequently would create an undue amount of administrative responsibilities with respect to little gained from the more frequent updating. Generation does not vary significantly on a two or three year average as suggested in the change so updating every year or two would result in insignificant changes to the unit baselines. The one result from updating more frequently would be to get new units into the main allocation pool quicker. This would be at the expense of retired units losing allocations sooner. The Department feels that the structure proposed balances the need for retired units to retain allowances for a period of time and new units to be incorporated into the main allocation pool quickly.

Annually updating allocations in 2009 to 2014 would involve administrative time as well as additionally uncertainty that the Department has tried to avoid. The Department has been informed by a number of utilities that the first phase of CAIR (2009 to 2014) will be the most difficult compliance target and therefore the Department has crafted the allocation structure to limit the amount of uncertainty for this phase.

C. Fuel weighting

Fuel weighting (or "fuel adjustment factors") adjusts the baseline of a unit dependent on the primary fuel that it burns. In the FIP, the baselines are multiplied by 1.0 for coal-fired units, by 0.6 for oil-fired units and by 0.4 for all other fuels. The proposed rule does not use any adjustment based upon fuel.

1. In Support

Clean Wisconsin, Sierra Club, RENEW, Business Council for Sustainable Energy, and Calpine support the proposed allocation structure that does not include fuel adjustment factors.

The reasons given for supporting the elimination of fuel weighting are:

- Fuel weighting advantages dirtier generation methods, which emit more pollution per unit of heat input or per unit of energy output.

⁶ Allowing these new sources to enter the main pool during Phase I would provide the dual benefit of reducing out-of-pocket allowance costs for the newest and cleanest power generating plants in Wisconsin, as well as freeing-up new source pool allowances that could be made available for expected new coal fired sources, which will require significant allocation quantities. Based on internal analysis, Calpine estimates that the costs associated with market purchase of allowances necessary to comply with the proposed CAIR rule will exceed \$476,000 for our Riverside Energy Center facility alone during the Phase I period of 2009-2014. This figure represents costs driven exclusively by the requirement to purchase NOx allowances necessary to make up for shortfalls from the new source set aside pool. However, modifying the rule to allow for annual updates to the state allocation baseline beginning in Phase I will allow the Riverside Energy Center to receive a main source pool allocation beginning in 2013 and will reduce compliance costs by more than \$211,000, which would be incurred in just two years of operation from 2013 and 2014. At the same time, such a change would free nearly 80 tons of annual and approximately 26 tons of seasonal NOx allowances for use by other sources out of the new source set aside pool.

- Fuel weighting as proposed in the federal rule gives preference in allowance allocation to coal, then fuel oil and lastly to natural gas – which is exactly opposite of the legislative priorities in Wis. Stat. § 1.12(4).
- The rationale for fuel weighting given by the EPA does not apply to the proposed rule because of the updating provision. The EPA states that because of the one-time allocation based on pre-CAIR operating data, electricity producers have no incentive to change their behavior to select less-polluting electricity production options. Electricity producers can affect future allowance allocations, and therefore have an incentive to use more efficient and lower-polluting generating options.
- Reduction of allocations based on fuel type creates an artificial signal that shields the true cost of emission reductions from sources that have the largest proportion of emissions.
- With the cleaning burning fuel, the fuel adjustment factors included in the federal rule effectively require facilities to meet emission limits that are more stringent than those faced by coal-fired facilities. Elimination of fuel adjustment factors in DNR’s rule will provide an equitable distribution of NOx allowances, allow affected sources to meet the same standard, and avoid artificial influences that would distort the cost of compliance.
- The free market should allow generators to find the most cost effective and efficient ways of controlling emissions across a fleet of sources. By imposing an artificial weighting scheme on allocations that purportedly reflects the inherent ability of affected sources to make reductions, the true cost of compliance for certain sources is subsidized as compared to other sources. Rather than letting economic and technical factors drive generators to the best and lowest cost decisions across all fuels and sources, the federal model rule has the effect of influencing fuel choice in generation by shifting the compliance burden away from coal-fired sources and toward those that use oil and natural gas.
- Fuel weighting tends to protect historically higher-emitting sources, many of which have not been required under other Clean Air Act programs to make pollution control upgrades and is particularly unfair to clean sources. This is especially true for new sources that have made a significant investment in pollution control in order to meet modern requirements (principally under the NSR program and the underlying BACT requirements).

2. In Opposition

We Energies, WMC, Alliant Energy, WUA and Dairyland Power oppose the elimination of fuel weighting factors as proposed in the hearing authorization draft rule.

The reasons given for opposing the elimination of fuel weighting are as follows:

- The practical impact of this change is to provide a windfall to natural gas units at the expense of making emission reductions more costly for existing coal generation.
- This departure from the Model Rule creates winners and losers, and we believe it is better public policy to have the neutral consistency of the Model Rule.
- The elimination of fuel weighting has the impact of unfairly impacting utility generation economics by reducing the fuel diversity and energy supply mix within the state.
- WDNR elimination of fuel adjustment factors is unwarranted and interferes with Wisconsin energy policy development.
- The EPA evaluations in development of the CAIR did not find that applying fuel adjustment factors would distort credit markets. In fact, the EPA determined that applying fuel adjustment factors in issuance of allocations represented the equitable market-based approach to reflect the inherently higher emissions rate of coal-fired units and consequently the greater financial burden on these units to install controls.
- EPA also found that the use of fuel adjustment factors in the Model CAIR Trading Program allocation method would not result in changes to generators' choices for fuel efficiency.
- WDNR's statement on Wis. Stat. 1.12(4)(d) fails to include a proper analysis of how this deviation from the EPA Model CAIR Trading Program is cost-effective or technologically feasible given existing limitations of fuel supply and infrastructure within Wisconsin.

3. Department Response

The use of fuel weighting factors as proposed in the federal rule is in direct contradiction to the energy priorities in Wis. Stats. 1.12(4)(d). Incorporating fuel weighting into the allocation structure would shift a higher number of allowances to the coal-fired units. This artificial shift to the coal fired plants reduces the effectiveness of the market being able to determine what the most cost effective control is. Fuel weighting subsidizes those emitters with higher emission rates and does not encourage the development of cleaner generation. Eliminating fuel weighting will encourage development of clean coal projects in addition to allowing lower polluting generation to receive unbiased allocations.

Fuel weighting is by its nature inexact, since it makes broad generalizations across fuel types. The elimination of fuel weighting allows the market to deal with the intricate nature of determining the least cost emission reductions. These variables include the volatile price of fuel, the price of pollution control devices, supply issues and electric demand. Since all of these variables are notoriously difficult to predict relying on fixed and highly simplified fuel adjustment factors may distort the market. With the elimination of these factors, the market will be able to more appropriately and sophisticatedly approximate the least cost control and respond to unforeseen changes in the markets.

The purpose of eliminating fuel adjustment factors is to allow the market to accurately and without distortion distribute the allowances to the least cost generation. It allows the market to balance the raising costs of fuel with the cost of installing pollution controls.

D. Auctions

The FIP does not include a provision for auctioning of the NOx allowances but the federal rule does give the states the discretion to auction allowances in the CAIR state implementation plan. The proposed rule does not have a provision for auctioning of allowances.

1. Suggested Changes

Suggested Change: Clean Wisconsin, Sierra Club and RENEW recommend that the Department consider setting aside a portion of allowances to be auctioned to produce a revenue stream to help fund agency activities related to EGUs, including CAIR implementation, permitting and compliance.

Suggested Change: A number of citizens recommended auctioning some allowances to raise revenue for permitting and enforcement.

Department Response: Although an auction may raise additional funds for the Department, auctions have a high administrative cost as well as a high level of complexity. One of the overarching goals of the proposed rule is that it be relatively simplistic. Adding an auction would add a level of complexity that could not be justified by the minimal amount of revenue raised. Additionally, this proposal would require legislation creating the statutory authority for the Department to hold an auction and use the resulting revenue for program expenses.

II. Renewable Energy

The FIP only distributes allowances to fossil fuel-fired units. Although the FIP does not incorporate renewable generation into the CAIR NOx allocations structure, the federal rule does give the discretion to the state to allocate NOx allowances to renewable units either through a set-aside or through direct allocations. Initially, the Department had proposed, through a series of public information meetings, to have a renewable energy and energy efficiency set-aside. Through comments received and more investigation, the Department proposed that direct allocations to renewable units be made through the main allocation pool resulting in a simplistic scheme to include renewable units limiting both the state administrative burden as well as the burden on electric generators.

1. In Support

Clean Wisconsin, Sierra Club, RENEW, AWEA, Business Council for Sustainable Energy, MG&E and a number of citizens support the proposed allocation of allowances to new sources of renewable energy from the main allocation pool once the unit has established a baseline.

The following reasons were given in support of providing direct allocations to new renewable units:

- Allowance allocation to renewable units will encourage investment in and development of clean, renewable energy sources.
- As additional renewable generation comes online, either for state RPS compliance or other goals, there will be displacement of marginal conventional generation and the associated emissions. This will create additional value under the CAIR program in Wisconsin, as the needed emission reductions to achieve state-specific CAIR goals will be reduced due to the displaced emissions.
- This regulatory structure will provide benefits to Wisconsin including: lower costs of meeting the CAIR caps; collateral reduction of non-capped pollutants; increased economic activity in the state for the development of renewable and efficiency resources and reduced demand for fossil fuels, contributing to lower fuel costs and improved state balance of payments.

2. In Opposition

We Energies, WMC, Alliant Energy, WUA and Dairyland Power oppose the inclusion of renewable energy for allocations in proposed rule.

The reasons given for the opposition to the proposed inclusion of renewables are:

- Renewable allocations would not occur until five years after the renewable sources become operational. This delayed financial incentive would not motivate construction of additional renewables.
- Renewable allocations result in additional transactional costs associated with transferring allocations back to fossil generation units. This only adds to the complexity of the program and increases the costs of reducing emissions.
- Establishes energy policy in the state.
- The WDNR's evaluation has incompletely discussed the impact of this rule proposal on existing policy. Under Item (3) "How this proposal affects existing policy" the WDNR's response only references existing state statutory policy for ozone rules (s. 285.11(6) Wis. Stats.). This section does not address the new Wisconsin Energy Efficiency and Renewable Resources Legislation (SB 459) signed on March 17, 2006.
- We are concerned that the WDNR has not consulted with the PSCW regarding the impact and interaction of these state rules.
- Additional administrative burden of tracking not only CAIR emission credits for renewables, but also the Chapter 118 RRCs.
- The Department suggests that inclusion of renewables will provide for another compliance strategy alternative to the Wisconsin CAIR rule, but this is misleading as the primary driver for Wisconsin utilities in renewable energy planning will be the Chapter 118 requirements.

3. Department Response

Allowing renewable units to receive allowances from the main allocation pool will create a financial incentive for developing renewable units and make renewable energy more competitive. This is an important environmental goal because renewable energy is a low or non-emitter of pollutants and will reduce the amount of NOx produced in Wisconsin per MWh. Although the form of the incentive does not offset the initial start up costs of a renewable unit and the incentive will be delayed until the renewable unit has five years of operating data, this incentive will decrease the cost of renewable energy and make it more competitive with fossil fuel-fired generation.

Inclusion of renewable energy in the allocation structure the Department does not create energy policy, as suggested. Instead, it follows the energy priorities detailed in Wis. Stats. 1.12(4)(d). The proposed rule structure also does not contradict the RPS standards that were recently enacted – it actually compliments the development of additional renewable units. Under 2005 Wis. Act 141, a utility is required to develop additional renewable energy by 2015. This additional renewable energy will result in additional allowances that can be used to help with compliance at CAIR units. Under the federal rule, the Wisconsin utilities would not receive any allowances from the development of new renewable units necessary to

comply with 2005 Wis. Act 141 and either have to buy allowances on the market or install pollution control devices to reduce emissions.

A generator is not required to include renewables in the CAIR allocation calculation. If a facility determines that the administrative burden outweighs the gains from requesting allowances from the main allocation pool, it does not have to participate. This is simply one option that will be available for generators and it is not mandatory that they participate.

Additionally, the inclusion of new renewable generation will assist both renewable units and fossil-fueled units in staying competitive with Midwest states. A majority of the Midwest states are proposing some method of inclusion of renewable generation into the CAIR structure. See Appendix A of this Memo for a comparison of CAIR NOx allocation structures in the Midwest states.

4. Suggested Changes

Suggested Change: Allocate allowances from the new unit set-aside to new energy efficiency projects and new renewable energy generation, as well as allow existing renewable energy generation to receive allocations from the main allocation pool.

Department Response: The Department is proposing to keep the allocation structure the same. DNR proposed excluding new renewable projects from the new unit set-aside to reduce the pressure on the new unit set-aside and to reduce the compliance costs for new fossil-fueled fired units. It is correct that renewable units could use the new unit set-asides to off-set the cost of start-up. But, new fossil-fueled fired units have compliance costs in the first year of operation in addition to the high costs of start-up. The Department encourages both the development of renewable energy and the development of new cleaner and more efficient fossil fuel-fired units. By allowing only the new fossil fuel-fired units to apply to the new unit set-aside this will decrease the cost of compliance in the initial years of operation for the cleaner, more efficient fossil fuel units.

The Department is proposing to include new renewables unit in allocations from the main allocation pool only because this is meant to create an incentive to develop renewable generation and to offset the costs of development of new renewable units. Allowing existing renewable units to receive allowances would serve this objective.

Suggested Change: Clean Wisconsin, Sierra Club, RENEW and citizens recommend the creation of a renewable/ energy efficiency (RE/EE) set-aside. Allowances should be allocated to RE/EE projects that are not already required by 2005 Act 141. The allowance pool for RE/EE projects should be significantly larger. DNR should adopt a RE/EE program as part of the SIP rules that matches or exceeds the 15% proposed by Minnesota and 12% proposed by Illinois.⁷

Department Response: The proposed rule incorporates both renewable energy and generation efficiency into the allocation structure. Renewables units are allowed to receive allowances from the main allocation pool based upon their generation. Generation efficiency is rewarded through the allocation of allowances based upon generation output instead of heat input. The Department determined that rewarding demand side energy efficiency projects would be very difficult to do in the structure of the CAIR allocations and would involve a high number of staff hours. Additionally, a set-aside for renewables would have the same administrative requirements. Therefore, adding a set-aside for renewables and generation efficiency adds administrative requirements and complexity to the CAIR structure. The Department has determined that in keeping the structure as is, this will allow for the inclusion of both renewable energy and energy efficiency without additional administrative burden to the Department or added complexity to the rule structure.

⁷ Renewable energy and energy efficiency will create jobs and economic security for Wisconsin. According to EPA guidance, if all states set-aside five percent of their allowances for RE/EE projects, the 28-state CAIR region would see annual savings of \$5 billion in consumer energy bills and \$150 million in air quality compliance costs, while creating 40,000 jobs.

Suggested Change: MG&E recommends that the definition of owner should be modified to include owners of renewable resources. This should be modified to include CAIR renewable units.

Department Response: The proposed rule language has been modified to include CAIR renewable units in the definition of owner and operation. Additionally, the process for identification of a representative for CAIR renewable units as well as the process for a CAIR renewable unit to apply to the main allocation pool has been clarified.

III. New Units

Units that begin operation on or after January 1, 2001 (referred to as "new units") do not receive allocations from the main allocation pool for 2009-2014 since these units do not have sufficient operating data for establishing a baseline for the initial allocation in 2007. For these new units, a set-aside is created that consists of both annual and ozone season allowances. The new units apply to the set-aside based on the unit's previous year or ozone season NOx emissions. Any allowances in the set-aside that have not been distributed to new units are distributed to units in the main allocation pool pro rata.

The size of the new unit set-aside in the FIP is 5% of the state budget for the years 2009-2014 and 3% of the state budget for the years 2015 and later. The size on the new unit set-aside in the proposed rule is 7% of the state budget in all years.

1. **Suggested Changes**

Suggested Change: Clean Wisconsin, Sierra Club, RENEW and citizens recommend that unused set-aside be banked for future use instead of redistributed. The following reasons were given:

- Banking these credits for future use will extend the utility of this program by accounting for future expected growth in the electric generation industry in the state.
- By redistributing unused credits to the main allocation pool, the set-aside does not support lower emitting sources as well as it could.
- Banking unused new unit credits will strengthen the set aside program and continue to assist new, lower-emitting units during growth in the energy industry.

Department Response: Banking unused new unit set-aside allowance may potentially result in a state program that is more stringent than the federal program and would not be allowed under Wis. Stat. 285.11(6).

Suggested Change: MG&E comments that the proposed rule is not clear as to how a new unit would receive allocations in its first and second year of operation.

Department Response: The Department has added some clarifying language to the proposed rule.

Suggested Change: Calpine requests that DNR revise the methodology for allocation of new source set aside allocations to one based on potential emissions of the affected source, subject to pro-rata adjustments. This methodology would provide the opportunity for a new generating facility to immediately obtain an allowance allocation for its first CAIR control period.

Department Response: The Department is proposing to retain the structure of allocating the new set-aside allowances as proposed. Allocations based on potential to emit may result in new sources receiving allocations from the new unit set-aside that are not needed for compliance. Additionally, it would increase the likelihood that the new unit set-aside would be over-subscribed.

IV. Cogeneration Units

The FIP discounts thermal energy provided by cogeneration units. The proposed rule removes this discount and allocates allowances based on 100% of the thermal energy generated.

1. **Comment**

Clean Wisconsin, Sierra Club, RENEW, Business Council for Sustainable Energy and Calpine support the proposed treatment of thermal energy from cogeneration units.

The reasons given for the support of this provision include:

- The proposed rule correctly counts thermal energy at 100% since cogeneration units have higher efficiency and lower emissions than traditional coal plants. The EPA model rule assumes 100% efficiency for electric generation, but only 80% efficiency for the portion that is used as steam heat. This has the absurd result of discriminating against cogeneration facilities, which should be encouraged because of the superior efficiency of such plants.
- Cogeneration is the most readily available and widely applicable form of energy efficiency for the power and thermal generation sectors, and its application greatly contributes to emission reductions as well as energy savings.

2. Department Response

The proposed rule includes this provision.

3. Suggested Changes

Suggested Change: Wisconsin Paper Council notes that the definition of "cogeneration unit" in NR 432 differs from the federal rule definition. If the Department modifies the rule to use the federal definition, we urge the Department to coordinate closely with EPA regarding a potential inadvertent problem in the EPA definition relating to the ability of certain biomass boilers to meet the efficiency standards included in the federal definition. Resolution of this issue must be consistent between state and federal regulations.

Department Response: The Department has made the change in the proposed rule to match the federal definition. The federal definition for co-generation has to be used since it affects the applicability section of the CAIR trading program. The EPA has informed the Department that in order to participate in the federal trading program, the applicability section must be the same as the applicability section in the federal implementation plan.

With respect to biomass boilers, no specific boiler has been brought to the attention of the Department. If this becomes an issue, the Department will work with the unit to determine if it can be rectified through a separate rule making process.

V. Compliance Supplement Pool

The FIP allocates the CSP to units that have early reductions of NO_x based upon a target emission rate of 0.25 lbs/mmBtu. The proposed rule for hearing authorization lowered the target emission rate to 0.15 lbs/mmBtu.

1. In Support

Clean Wisconsin, Sierra Club, RENEW and a number of citizens support reducing the definition of early reductions necessary to qualify for early emission reduction allowances from the compliance supplement pool from the model rule proposal of 0.25 lbs/mmBtu to 0.15 lbs/mmBtu.

2. In Opposition

WIEG, We Energies, WMC, Alliant Energy, WUA and Dairyland Power oppose the Department's lowering of the emission limit threshold for early emission credits from the compliance supplement pool.

The reasons given for this opposition are:

- The restrictions will discourage investments in pollution control technology at a time when the emissions are higher and potential environmental benefits from are the greatest.
- This proposal will ultimately harm the ratepayers of the utilities that acted in good faith and moved forward ahead of the deadlines.
- There is no rationale offered for why the Department is proposing to limit these early reduction credits. We find this proposal to be contrary to the Department's overall policy of encouraging early emission reductions to accelerate associated environmental benefits.

- The early reduction credits have a market value and withholding them has the impact of increasing the cost of emission reductions.
- This element also effectively discourages participation in voluntary, pro-active programs such as Green Tier.
- The WDNR suggests that a 0.15 lb/mmBtu baseline for measurement of early NOx reductions is appropriate, because this represents the level in the NOx state implementation plan (SIP) call rules and also the EPA modeled 2009 emission rate for the federal CAIR program. Unfortunately, both of these points fail to justify the use of a 0.15 lb/mmBtu baseline for early NOx reductions since: (1) Wisconsin is not regulated under the NOx SIP call rules; and, (2) EPA CAIR modeling assumes NOx emissions higher than 0.15 lb/mmBtu prior to 2009 and uses this value as the end point for first phase compliance under the Model CAIR Trading Program.
- Lack of acknowledgement by the Department of the investments made in early NOx reductions.

3. Department Response

The Department agrees with the comments in opposition and is changing the rule to reflect the emission target level given in the federal rule of 0.25 lbs/mmBtu to give full credit to early emission reductions.

4. Suggested Changes

Suggested Change: Change the emission target level from the proposed level of 0.15 lbs/mmBtu to 0.11 lbs/mmBtu to reflect the level achievable with modern combustions controls.

Suggested Change: Unused CSP allowances should be retired at the end of the year as being proposed in Illinois.

Department Response: The Department has considered lowering the early reduction target level as suggested. The Department feels that lowering the emission target level will penalize those units that have made early reductions which is not the intent of the CSP allowances. Given the short time span for installation of controls, a lower emission reduction target will not encourage further reductions since the installation of controls has already been determined for 2007 and 2008.

The comments suggest retiring CSP allowances at the end of each year. CSP allowances are only available in the year 2009. The draft rule as it is proposed retires unused CSP allowances at the end of 2009.

Suggested Change: Allow early emission reductions prior to 2007 and those emission reductions registered on the Voluntary Emission Reduction Registry to receive allowances from the CSP.

Department Response: The allocation of early emission reduction allowances from the CSP is done based on reductions in 2007 and 2008 only. Those emission reductions performed before these years are outside the scope of this rule.

VI. Opt-in Provision

The FIP gives the states the option to include industrial units into the structure of CAIR. Under this provision, industrial units that emit all emissions via a stack and monitor these emissions using part 75 monitoring requirements could obtain allowances from the allocation pools like an electric generating unit. This is called the "opt-in" provision since these units would have the choice on whether to opt-in to regulation under CAIR.

1. Comment

Wisconsin Paper Council, WIEG and MG&E support the inclusion of an opt-in provision for the following reasons:

- It may make economic sense for some paper companies to opt-in to the CAIR rule.
- This potential cost-saving option should be provided to Wisconsin companies.

2. Department Response

The Department investigated whether opt-in units could be incorporated into the structure of the rule. Unfortunately, as a prerequisite to participating in the federal trading program, the EPA has determined that states that incorporate opt-in units must do so using the exact language in the model rule and the federal implementation plan. The structure of allocations to opt-in units would not work within the structure of the proposed allocation structure. Therefore, the Department has determined that opt-in units will not be included at this time. There is the potential that through negotiations with the EPA that opt-in units may be added at a later date through a separate rule making process.

VII. Use of Federal Rule

A. **Consistency between state and federal rules**

1. **Comments**

Wisconsin Paper Council and WMC oppose the proposed rule because it differs from the federal regulations. They cite the following reasons for the opposition:

- To the extent that the state regulations differ from federal regulations, there must be a sound policy basis and the differences should not impose additional costs on Wisconsin companies that would not be borne by similar companies in other states.
- The changes to the federal rule structure have the potential to increase costs for Wisconsin utilities and businesses that purchase electricity from these utilities, WPC is not aware that these potential cost increases have been quantified, either by the Department or by the utility industry.
- DNR efforts to deviate from the federal CAIR rule will unnecessarily add compliance costs that drive up already escalating energy costs for Wisconsin citizens.
- These costs make Wisconsin businesses less competitive with competitors in other states.

2. **Department Response**

The federal model rule was written to be used as a model for the states to follow. A number of states have deviated from the federal rule. Most importantly, the three states that Wisconsin generators compete with – Illinois, Michigan and Minnesota – may all deviate from the model rule. This means in order for our generators to stay competitive with the surrounding states, Wisconsin must have a rule that allows for the inclusion of renewables. Illinois, which is the largest importer of energy into Wisconsin, is basing allocations on generation output, is not distributing the CSP, has a 30% set-aside, and is including renewables in the allocation structure.

The deviation from the federal model rule will not result in additional costs to the utilities as a whole since the allocation structure does not reduce the number of allowances available for compliance. It is not stricter than the federal model rule for the exact same reason. Additionally, although the proposed rule structure results in a different distribution of allowances, it distribute the same number of allowances as under the FIP and does not restrict interstate trading and there should not result in a significant cost differential at the state level.

B. **Proposed rule goes beyond EPA requirements**

1. **Comment**

Local 2150 of the International Brotherhood of Electrical Workers (IBEW 2150) and WMC do not support a CAIR rule that exceeds the requirements of the Clean Air Act for the following reasons:

- Emission rules that go beyond the EPA's requirements may place Wisconsin at an unfair disadvantage regarding compliance with clean air rules.
- Additional regulatory restrictions imposed by state government will only prove harmful to the state's economy while providing little or no difference on air quality.
- The state's industries and utilities will have unfair restrictions attached to their costs of doing business. These state imposed rules will cost workers their jobs in a Wisconsin economy that is trying to grow its manufacturing base and provide reliable and affordable power.
- The proposals being offered to date by the DNR, including the draft CAIR rule, substantially exceed the requirements of the Clean Air Act and what is needed to meet the ozone standard.

With full compliance with the 8-hour ozone standard close at hand, the draft CAIR rule provisions that exceed or deviate from the federal CAIR rule are clearly unwarranted and inconsistent with well established state policies.

- DNR has no authority to exceed the requirements of the Clean Air Act when developing ozone programs.
- DNR proposals that are inconsistent with EPA's rules or policies are not in conformity with Wisconsin statutes. In addition, DNR rules that impose emission reductions beyond those reductions required to meet federal air quality standards have the same effect as promulgating air quality standards that are more restrictive than federal standards.

2. Department Response

The proposed rule does not go beyond the federal version of CAIR. The same numbers of allowances are available for compliance under the state version as under the federal version.

As described above in the response in section VII A, a state specific program will allow Wisconsin generators to remain competitive with generators from surrounding states.

C. Adopt the federal version of CAIR

1. In Support

IBEW 2150, WIEG, We Energies, MG&E, WUA and Dairyland Power support adopting the federal version of the Clean Air Interstate Rule.

The reasons given for adopting the federal version of CAIR include:

- It would help keep Wisconsin businesses competitive. Going beyond the federal CAIR mandate will increase costs and drive up the price of energy in state.
- "Wisconsin only" regulations will put our industry at a competitive disadvantage and could lead to job losses. By considering a rule that goes beyond the federal CAIR rule, the Department is creating additional regulatory uncertainty and therefore will be pushing electric rates even higher.
- The federal allocations have been the only reliable information available for utility compliance planning and construction scheduling since March 2005.
- WDNR has not qualified the economic burdens that may be associated with these differences.
- Wisconsin should expedite issuance of the federal CAIR rules by adopting the U.S. EPA's recommended model regulatory framework for the state of Wisconsin.
- While the Department has made several improvements to make the state-level rules proposed today closer to U.S. EPA's Model program, the technical inconsistencies that remain are significant and represent major issues to future energy supply planning in Wisconsin.
- State-level regulations are also an issue for utilities serving consumers in adjoining states.
- Adopting the federal model trading rule provides utilities with the regulatory certainty to maximize savings for customers related to labor, construction, materials and technology acquisition costs – an important consideration given the compressed timeframe for compliance.

2. In Opposition

Calpine opposes the adoption of the federal rule. Recognizing that states may want to adopt alternative methods for allocation, the USEPA has provided the flexibility for state-level air quality authorities to develop alternative CAIR implementation approaches. Calpine supports the alternatives included in the draft rule, many of which are specifically aimed at encouraging the development of low and non-emitting power generation, energy efficiency and other clean energy goals. Such mechanisms will provide synergistic benefits that will assist Wisconsin in achieving local non-attainment goals, which will not be achieved from CAIR-specific reductions alone, as well as promoting improved fuel efficiency in power generation and helping to maintain affordable electricity rates for Wisconsin's consumers.

3. Department Response

The proposed rule does not go beyond the federal version of CAIR. The same numbers of allowances are available for compliance. The Department has determined that there will be no significant difference in costs at the state level. There has been no evidence presented that the state rule will be more expensive to implement than the federal rule.

One comment is concerned that by going with a state specific rule that this will create difficulties for utilities that have interests in other states. This may be a concern if the adjoining states were all going with the federal model rule. But, out of the five adjoining states, only Iowa has chosen to use the federal model rule. Minnesota has opted to be regulated under the FIP for 2009 but is still examining the possibility of a state specific regulatory scheme. Even if Wisconsin went with the federal model rule, there would still be inconsistencies between adjoining states.

D. Goal of CAIR

1. Comment

Alliant Energy believes that the WDNR's rule proposal fails to recognize the ultimate goal of the Federal CAIR program to prevent interstate transport of emissions at the regional level. The CAIR program is not intended to micro-manage emissions at the local level, as will essentially be the end result of the WDNR's proposed state rule package. Alliant believes that this is in the best interest of all parties to simply and efficiently implement the EPA Model CAIR Trading Program, as this approach will provide for clean air while allowing utilities to comply with emission reductions in the most cost-effective manner possible using streamlined administrative requirements.

2. Department Response

The proposed rule does not limit the distribution or the trading of allocations. The Department has determined that the proposed structure allows for the state to tailor the CAIR program to suit Wisconsin's policy goals as well as creating a simplistic program and one that has low administrative costs.

VIII. Implementation Issues

A. Delay of the CAIR SIP

1. Comment

WIEG, WMC and Alliant commented that the delay of the CAIR rule will increase the compliance costs, drive up the price of energy in the state and heighten reliability risks.

2. Department Response

The delay of the rule has been unfortunate. There have been a number of factors that have contributed to the delay. First, the Department is tied to the release of guidance and regulatory documents from the EPA and these documents have been slow in coming. For instance, the release of the "final" CAIR occurred May 12, 2005. Through discussions with the EPA, the Department understood the potential of an abbreviated SIP option. This was not fully explained until the release of the Federal Implementation Plan on April 28, 2006. This delay hindered the Department's ability to fully analyze what was the best course of action for the Department.

Even with this delay, the Department is on target to meet the abbreviated SIP deadline of March 31, 2007.

B. Cost of Proposed NR 432

1. Comments

- Calpine states that experience has shown the emission reductions can be more cost-effectively achieved through programs that update allowance allocations periodically, do not offer perpetual allocations to any facility, and do not differentiate allocation treatment based on the vintage of the affected facility. This is because new facilities, which offer lower emission rates due to compliance with Best Achievable Control Technology (BACT) requirements under New Source

Review and Prevention of Significant Deterioration (NSR/PSD) programs, tend to operate at higher utilization rates due to their superior thermal efficiencies. Such is the case with the NOx SIP Call Program, where emissions have been reduced in an efficient and cost-effective manner in the majority of participating states. Concurrently, these states also have seen an increase in development, construction and operation of new, clean and efficient power generating plants.

- WIEG, WMC, WUA and Dairyland are concerned that the cost of the proposed rule has not been properly quantified and that the proposed rule will increase energy costs, placing Wisconsin at a significant disadvantage.

2. Department Response

The proposed rule is not more stringent than the federal rule because the same number of allowances are available under the FIP and the proposed rule. Additionally, the proposed rule does not limit interstate trading. As indicated by Calpine, the proposed rule structure has the potential to even decrease compliance costs.

C. Proposed rule drives energy policy

1. Comments

WIEG, WUA, Dairyland and We Energies are concerned that the proposed rule drives energy policy.

- The Department is promoting fuel switching away from coal-fired generation toward natural gas-fired generation and renewable sources such as wind. Becoming more dependent on natural gas and renewable energy is almost certain to drive up electricity rates and should therefore be given a vigorous cost analysis.
- State policy regarding energy efficiency and renewables generally falls under the Public Service Commission and Chapter 196.

2. Department Response

The proposed rule does not drive energy policy – it follows the energy priorities laid out in Wis. Stats. 1.12(4)(d). Additionally, the rule is written from a pollution reduction policy approach and uses energy efficiency and renewable energy as a pollution reduction option. Although this overlaps with energy use, it is clearly pollution reduction and prevention as the primary goal in a cost-effective manner.

D. State Participation in the CAIR Emission trading program

1. Comment

We Energies supports the Department's proposal to participate in the CAIR emission trading program for the following reasons:

- The national cap and trade program provides an opportunity to reduce emission from our generating units in the most cost effective manner possible.
- Having the option of purchasing emission allowances to supplement unforeseen shortfalls is a valuable complement to the company's proactive emission reduction plan.
- Having the option of "trading on the margin" is important to cover any potential impacts of forced outages or other unexpected operational events.
- Participating in the federal program offers an administrative savings to the Department since EPA would administer all of the emissions tracking, reporting and verification functions.
- Participating in the national trading program also streamlines regulatory requirements. States that opt into the federal program facilitate a consistent program structure and consistent compliance requirements for utilities like We Energies doing business in multiple states. This reduces the utility staff time necessary to comply with program administrative tasks, and allows companies to more easily incorporate compliance activities into their environmental management systems and standardize emission software and databases.

2. Department Response

The Department is participating in the federal trading program as indicated.

IX. DNR's Proposed Rule Is Not Needed to Meet the Ozone Standard

1. Comment

WMC and WUA comments that DNR acknowledges that their proposal to allocate allowances based on generation output was done to effect more NOx emission reductions in the non-attainment areas and thereby improve Wisconsin's air quality and that the Department is using CAIR as part of its SIP for the 8-hour ozone standard.

2. Department Response

In the background memo for hearing authorization, the Department did state that the proposed rule had the effect of allocating less allowances in the nonattainment area resulting in additional environmental benefits. The impact of output based allocations had this effect but it was not the purpose of the basis for allocations.

X. Regulatory Complexity and Administrative Burden

1. Comment

Alliant comments that it believes the proposed rule will make the rule significantly more complex to implement. This complexity and associated administrative burden cannot be justified when equally valid approaches are readily available today at no incremental cost.

2. Department Response

The additional complexity and administrative burden that is associated with the proposed rule over the FIP is justified by rewarding generation efficiency, encouraging the development of renewable energy and an allocation structure that provides for equal or better environmental protection.

XI. Proposed Rule Is Responsive to Evolving Energy Markets

1. Comments

- Calpine comments that the proposed rule implements allocation mechanisms that are responsive to evolving energy markets. The use of historical operational baselines that are fixed in time perpetuates the market distortions arising from traditional regulation. This result occurs whether a fixed time period is used as an initial baseline for long term allocations or whether a particular period in a unit's operational history is used.
- In Wisconsin, the vertical and horizontal market power of regulated utilities constrains economic dispatch of new plants owned and operated by independent generators. This limitation undermines the ability of new market entrants to fully utilize units during the initial periods of operation. As a result, a baseline determined on an initial operation period may not properly reflect the long-term operational profile of a given source and therefore will not yield appropriate air quality benefits. Shifts in fuel pricing, availability, transmission system constraints, transition to deregulated, customer-responsive wholesale markets, and other factors likely will result in changes to the operating profiles of generating facilities and, correspondingly, to emission reduction demands for Wisconsin.
- An environmental control program that is market-based should be designed in a way that can adapt to shifting market forces without imparting artificial signals to the market. DNR's proposed CAIR rule would implement this type of adaptable and responsive program.

2. Department Response

The proposed rule includes these provisions.

XII. Data Issues

1. Comment

We Energies is concerned with the mix of gross and net data used for calculating unit baselines for the following reasons:

- Using this mix of data conflicts with the intention of rewarding more efficient generations and creates inequities.
- The output based allocation methodology is not really rewarding energy efficiency, but rather making winners out of those units whose allocations are based on gross generation data, and losers out of those whose allocations are based on net generation data.
- Alliant Energy believes that the heat input data is superior since it is based on continuous emission monitoring (CEM) stack flue gas data measurements. This is most representative of real-time operating conditions affecting actual emissions. The CEM data is subject to EPA-approved QA/QC methods. The gross output data (MW-hr) reported to EPA is supplemental information and consists of a simple meter reading that is not subject to standardized QA/QC or certification as are the CEMS.

2. Department Response

See Department Response in section I.A.

XII. Green Tier

1. Comments

- MG&E is concerned that some may improperly argue that the wording of the proposed rule limits Green Tier participation to only those benefits and examples of "superior environmental performance" specifically enumerated in the rule. MG&E recommends that the rule be clarified to acknowledge that Green Tier participation is not so limited.
- MG&E also believes that sources which are participating in the Environmental Cooperation Pilot Program should be entitled to negotiate regulatory flexibility, incentives or innovative techniques that would otherwise be available under Wis. Stat. § 299.80.
- The definition of "CAIR renewable unit" is restricted to electric generating facilities which serve a generator with a nameplate capacity greater than 25 MW. The generation capacity of multiple "CAIR renewable units" can be combined in order to meet this 25 MW threshold, but only if done pursuant to the Environmental Results ("Green Tier") Program (Wis. Stat. § 299.80). A utility's ability to aggregate renewable resources should not be restricted simply because it chose to participate in the pilot program for the modern Green Tier legislation.

2. Department Response

The Department has modified the proposed rule language to address these concerns.

IIXV. Clarification of Rule Language

1. Comment

MG&E states that the proposed rule is confusing with regard to the data that must be used for calculating a unit's baseline at each five year interval and as to when a CAIR regulated source must possess sufficient allowances to demonstrate compliance for a particular year on emissions.

2. Department Response

The Department has modified the proposed rule language to address these concerns.

IXV. Technical Comments

A. Intention of CAIR to Include Frame 5 Combustion Turbines

1. Comment

Manitowoc Public Utility comment that it did not believe that it is the intent of the CAIR program to include frame 5 combustion turbines like the unit installed at the MPU Custer Energy Center. This unit is permitted to operate at a maximum of 24.5 MW and as such no CEMS were required. The unit was installed for peaking service and is further restricted to operate less than 194 hours per month (12-month rolling average). The generator is rated for more than 25 MW but the turbine would not have the capability to even deliver that amount of power unless ambient temperatures were less than 20 degrees Fahrenheit.

2. Department Response

This comment is being addressed through discussions and an applicability determination with the US EPA.

B. Thermal energy conversion

1. Comment

Calpine indicated that the label related to the thermal energy conversion incorrectly refers to the 3.4 factor in the units of MWh per mmBtu. In fact, the correct units for the conversion factor are mmBtu/MWh. Aside from this minor correction, Calpine recommends that DNR maintain the proposed mechanism for including thermal energy generated by CHP and cogeneration facilities in the total output calculation used for allocation of allowances under an output-based allocation system without additional modification.

2. Department Response

The Department has made this correction in the proposed rule language.

C. Technical Comments of EPA and Legislative Council Rules Clearinghouse

1. Comments

The Department received a number of technical comments from the Environmental Protection Agency. Primarily, the comments dealt with ensuring consistency between the federal rule language and the state rule language.

2. Department Response

The Department has made changes to the proposed rule language to address these concerns. Of particular concern was the definition of cogeneration unit. The Department has changed this definition to correspond to the federal definition. The Legislative Council Rules Clearinghouse also made some technical comments. The Department has made changes to the proposed rule language to address these comments.